

IN THE CLAIMS:

The current claims follow. For claims not marked as amended in this response, any difference in the claims below and the previous state of the claims is unintentional and in the nature of a typographical error.

1. (Currently Amended) A method for supporting downlink JD (joint detection) in a TDD CDMA communication network system, the method comprising:

judging whether [[the]] CAI (code allocation information) in a downlink timeslot will change in [[the]]a next TTI (transmission time interval);

inserting [[the]] changed CAI as a specific control information into a specified field in [[the]]a traffic burst in the downlink timeslot corresponding to current TTI if the CAI will change;

sending the traffic burst containing the specific control information to each UE (user equipment) in the downlink timeslot via a downlink channel.

2. (Original) The method of claim 1, further comprising:

when establishing connection with a UE, the network system sends the initial CAI to the UE.

3. (Previously Presented) The method of claim 2, wherein judging further includes:
judging that the CAI changes if at least one active UE leaves the downlink timeslot;
reclaiming the spreading code resource released by the UE;
wherein the changed CAI in step of inserting is the CAI after the spreading code resource
is reclaimed.

4. (Previously Presented) The method of claim 2, wherein judging further includes:
judging that the CAI changes if at least one UE joins the downlink timeslot;
allocating spreading code resource to the UE;
wherein the changed CAI in step of inserting is the CAI after the spreading code resource
is allocated.

5. (Previously Presented) The method of claim 2, wherein judging further includes:
judging that the CAI changes if the spreading code resource in the downlink timeslot is
reallocated to realize optimized configuration of the resource in the downlink timeslot;
wherein the changed CAI in step of inserting is the CAI after the spreading code resource
is reallocated.

6. (Previously Presented) The method in claim 1, wherein the specific control information
allows each UE in the downlink timeslot to perform one of the two JD methods of ZF-BLE and
MMSE-BLE.

7. (Currently Amended) A method for supporting downlink JD to be performed by a UE in a TDD CDMA communication network system, comprising steps of: the method comprising:
receiving a traffic burst in a downlink timeslot transferred by the network system via downlink channel;
detecting whether the traffic burst contains the CAI code allocation information (CAI) in [[the]]a next TTI in the downlink timeslot;
extracting the CAI if the traffic burst contains the CAI;
performing next-phase JD algorithm to decrease interference by using the CAI.

8. (Original) The method of claim 7, further comprising:
the UE receives the initial CAI from the network system when the UE establishes connection with the network system.

9. (Original) The method of claim 8, wherein the JD algorithm is one of ZF-BLE and MMSE-BLE.

10. (Currently Amended) A method for supporting downlink single-user JD in a TDD CDMA communication network system, comprising steps of: the method comprising:
judging whether [[the]]an ACN (active code number) in a downlink timeslot will change in [[the]]a next TTI;

inserting [[the]] changed ACN as a specific control information into a specified field in
[[the]]~~a~~ traffic burst in downlink timeslot corresponding to current TTI if the ACN will change;
sending the traffic burst containing the specific control information to each UE in the
downlink timeslot via downlink channel.

11. (Currently Amended) The method of claim 10, further comprising:
the network system ~~[[send]]~~sending [[the]]~~a~~ initial ACN to the UE when the network
system establishes connection with the UE.

12. (Original) The method of claim 11, wherein the specific control information allows each
UE in the downlink timeslot to perform an MMSE-BLE-SD-JD algorithm.

13. (Currently Amended) A method performed by a UE for supporting downlink single-user JD in a TDD CDMA communication network system, comprising steps of: the method comprising:

receiving a traffic burst transferred by the network system via downlink channel in a downlink timeslot;

detecting whether the traffic burst contains the ACN an active code number (ACN) in the next TTI in the downlink timeslot;

extracting the ACN if the traffic burst contains the ACN;

performing the next-phase JD algorithm to decrease interference by using the ACN.

14. (Currently Amended) The method of claim 13, wherein the step to be taken before step (I) further includes: prior to receiving a traffic burst transferred by the network system the UE receives the initial ACN from the network system when the UE establishes connection with the network system.

15. (Original) The method of claim 14, wherein the JD method is an MMSE-BLE-SD method.

16. (Currently Amended) A network system for supporting downlink JD, comprising:
- a judging unit, ~~for judging unit configured to judge whether the CAI code allocation information (CAI)~~ in a downlink timeslot will change in [[the]]a next TTI;
- an inserting unit, ~~for inserting unit configured to insert [[the]]~~ changed CAI as a specific control information into a specified filed in [[the]]a traffic burst in the downlink timeslot corresponding to current TTI when the CAI changes;
- a sending unit, ~~for sending unit configured to send~~ the traffic burst containing the specific control information to each UE in the downlink timeslot via a downlink channel.
17. (Original) The network system of claim 16, wherein the sending unit sends the initial CAI to the UE when establishing connection with the UE.
18. (Original) The network system of claim 16, wherein the judging unit judges that the CAI changes if at least one active UE leaves the downlink timeslot or at least one UE joins the downlink timeslot or the spreading code resource in the downlink timeslot is reallocated.

19. (Currently Amended) A UE for supporting downlink JD, comprising:
- a receiving unit, for receiving unit configured to receive a traffic burst transferred by [[the]]a network system via a downlink channel in a downlink timeslot;
- a detecting unit, for detecting unit configured to detect whether the traffic burst contains the CAI code allocation information (CAI) in [[the]]a next TTI in the downlink timeslot;
- an extracting unit, for extracting unit configured to extract the CAI when the traffic burst contains the CAI;
- a performing unit, for performing unit configured to perform next-phase JD algorithm to decrease interference by using the CAI.

20. (Original) The user equipment of claim 19, wherein the receiving unit receives the initial CAI from the network system when establishing connection with the network.

21. (Currently Amended) A network system for supporting downlink single-user JD, comprising:

a judging unit, ~~for judging unit configured to judge whether the ACN an active code number (ACN)~~ in a downlink timeslot will change in [[the]]a next TTI;

a specified ~~field in a~~ traffic burst in the downlink timeslot corresponding to current TTI when the ACN changes;

a sending unit, ~~for sending unit configured to send~~ the traffic burst containing the specific control information to each UE in the downlink timeslot via downlink channel.

22. (Original) The network system of claim 21, wherein the sending unit sends the initial ACN to the UE when establishing connection with the UE.

23. (Currently Amended) A UE for supporting downlink single-user JD, comprising:
- a receiving unit, ~~for receiving unit configured to receive~~ a traffic burst transferred by [[the]]~~a~~ network system via ~~a~~ downlink channel in a downlink timeslot;
- a detecting unit, ~~for detecting unit configured to detect~~ whether the traffic burst contains the ACN ~~an active code number (ACN)~~ in the downlink timeslot in [[the]]~~a~~ next TTI;
- an extracting unit, ~~for extracting unit configured to extract~~ the ACN when the traffic burst contains the ACN;
- a performing unit, ~~for performing unit configured to perform~~ next-phase single-user JD algorithm to decrease interference by using the ACN.

24. (Original) The UE of claim 23, wherein the receiving unit receives the initial ACN from the network system.